

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Notice of Allowability

Application No.

09/585,713

Examiner

Sanjiv D. Shah

Applicant(s)

BALABANOVIC ET AL.

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/7/2004.
2. ☒ The allowed claim(s) is/are 1-12,14-22 and 24-35.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 062804.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Sanjiv D. Shah
Primary Examiner
Art Unit: 2176

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kevin G. Shao on 6/24/2004.

The application has been amended as follows:

Please cancel claims 2, 13 and 23.

1. A method comprising:
extracting at least one visual feature from a document, the document having a plurality of pages, wherein at least one visual feature is weighted based on one of gradations and a location of the visual feature;

ranking each of the pages in the document based on the at least one visual feature, wherein the ranking is performed based on a similarity relationship between content of the respective page and the at least one visual feature; and

displaying page icons representing the pages of the document in an order based on a result of the ranking.

12. A computer system comprising:
a display;
a processor coupled to the display; and
a memory coupled to the processor and having stored therein a routine, which when executed by the processor, causes the processor to generate display data through:

extracting at least one visual feature from a document, the document having a plurality of pages, wherein at least one visual feature is weighted based on one of gradations and a location of the visual feature;

ranking the pages in the document according to the at least one visual feature, wherein the ranking is performed based on a similarity relationship between content of the respective page and the at least one visual feature,

selecting a page for representing a document according to a result of the ranking, and

displaying the selected page as the display data.

14. The computer system of claim (13) 12 wherein the visual feature is one of a picture, a text block, a character size, a character style, and a color, wherein each type of the visual features is assigned with a weight value representing a weight of the respective type used in the ranking.

15. The computer system of claim (13) 12 further comprising performing a saliency evaluation on each of the pages within the document to identify one or more pages that are significantly different from a remainder of the pages, using the at least one visual feature.

17. The computer system of claim (13) 12 wherein the visual feature is used as a distance measure between a first and a second consecutive pages within the documents, the distance measure representing a visual difference between the first and second consecutive pages.

22. An article of manufacture having at least one machine readable storage media containing executable program instructions which when executed by a digital processing system caused the digital processing system to:

extract at least one visual feature from a document, the document having a plurality of pages, wherein at least one visual feature is weighted based on one of gradations and a location of the visual feature,

rank pages in the document based on said at least one visual feature, wherein the ranking is performed based on a similarity relationship between content of the respective page and the at least one visual feature,

select the pages for representing a document based on a result of the ranking,
and

display selected pages.

32. A method comprising:

extracting at least one visual feature from a document, the document having a plurality of Pages, wherein at least one visual feature is weighted based on one of gradations and a location of the visual feature;

grouping the pages of the document based on a similarity relationship between the respective page and the at least one visual feature;

selecting representative pages from groups that are significantly different from a remainder of the pages of the respective group; and

displaying the representative pages for representing the pages of the respective group.

Drawings

2. New corrected drawings are required in this application because the labels on the drawings are not easily readable. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

3. The following is an examiner's statement of reasons for allowance: The cited prior art fails to teach alone or in combination the invention as claimed.

The invention as claimed extracts an icons, that are weighted based on one of gradations and location of the visual feature and ranking each of pages based on the icon or visual feature, wherein the ranking is performed based on a similarity relationship between content of the respective page and at least one visual feature and displaying page icons in order of results of ranking.

The cited prior art fails to teach weighting visual feature based on gradations and a location as claimed in combination with other claimed features. Therefore the claimed invention is allowable over the cited prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanjiv D. Shah whose telephone number is (703) 305-8355. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on (703) 305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2176

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sanjiv D. Shah
Primary Examiner
Art Unit 2176

S. Shah
June 28, 2004